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Report of the Special Rapporteur on the right to education

Note by the Secretariat

The Secretariat has the honour to transmit to the Human Rights Council the report of the Special Rapporteur on the right to education, Kishore Singh, prepared pursuant to Council resolution 26/17. The report addresses issues and challenges to the right to education in the digital age, with a focus on higher education. It considers how the norms and principles that underlie the right to education should be upheld while embracing digital technologies.

The report concludes with recommendations for ensuring that the use of digital technology in education is in keeping with State obligations on the right to education.

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I. Introduction

1. The present report was prepared by the Special Rapporteur on the right to education pursuant to Human Rights Council resolution 26/17. In it, the Special Rapporteur examines the right to education in the digital age and, specifically, how to uphold the norms and principles that underlie the right to education while embracing digital technologies, which are revolutionizing teaching and learning processes and transforming the landscape of higher education. He considers issues related to marginalization and exclusion, as well as the quality of education, especially human values in education. Concerns are expressed about the digital divide and about how it affects fundamental principles, such as equality of opportunity. The Special Rapporteur sets out policy and legal responses to address these issues and challenges, bearing in mind the normative framework of the right to education as established in international human rights treaties. He also highlights the repercussions of digital technologies on public investment in education and on the quality of education, especially in respect of preserving human values in education, and underlines the need to safeguard education as a public good. Finally, he offers a set of recommendations for ensuring that the implementation of digital technology in education is in keeping with State obligations on the right to education as laid down in international human rights conventions.

2. During the reporting period, the Special Rapporteur undertook a mission to Fiji and reported to the General Assembly at its seventieth session (A/70/342). In that report, he addressed public-private partnerships and the right to education, noting their linkage to increasing privatization in the sector. He highlighted their implications for the right to education and for the principles of social justice and equity. He concluded with recommendations on regulating such partnerships to safeguard the right to education and protect education as a public good.

II. Recent activities undertaken by the Special Rapporteur

3. From 25 to 27 May 2015, the Special Rapporteur attended a conference on the justiciability of the right to education and the post-2015 development agenda, organized by the Centre for Law and Policy Research in Bangalore, India, where he gave the opening and closing addresses. In his interventions, he stressed the importance of holding Governments accountable and called upon civil society and the intellectual community to defend education as a public good.

4. On 10 June, the Special Rapporteur participated in a round-table expert consultation on public-private partnerships in education, hosted by the Open Society Foundation, and interacted with experts from universities in Europe, North America and Asia, while addressing the issues of public-private partnerships worldwide, including the Chilean voucher model. Also on 10 June, he participated in a seminar on the application of standards on economic, social and cultural rights in domestic law, hosted by the International Organization for the Right to Education and Freedom of Education and the Permanent Mission of Portugal to the United Nations Office and other international organizations in Geneva. His intervention focused on the justiciability of the right to education and on Human Rights Council resolution 28/20, which underlines the importance of an effective remedy for violations of economic, social and cultural rights.

5. On 12 June, he spoke at an event on human rights policy responses to the growth of private actors in education, hosted by the Global Initiative for Economic, Social and Cultural Rights, the Right to Education Project, the Privatisation in Education Research Initiative and the Geneva Academy of International Humanitarian Law and Human Rights.

His intervention underlined the need to address the concerns raised by growing privatization in education.

6. On 16 June, the Special Rapporteur spoke at the Human Rights Council panel on the theme "Realizing the equal enjoyment of the right to education by every girl". He emphasized the need to ensure the quality of education and safe school environments. He urged States to ratify international human rights conventions, combat gender stereotypes and take positive actions in favour of girls. On 18 June, the Special Rapporteur held an interactive dialogue hosted by a Geneva-based non-governmental organization, Platform on the Right to Education, at an event organized to discuss continued engagement in his work and his latest report to the Council.

7. From 22 to 27 June, the Special Rapporteur participated in the nineteenth Conference of Commonwealth Education Ministers, hosted by the Bahamas. On 23 June, he spoke at the regional ministerial caucus, addressing key issues relating to the right to education. He also addressed the teachers' forum organized during the Conference, emphasizing the need to safeguard education from forces of privatization, especially its negative repercussions on the teaching profession.

8. From 21 to 24 July, the Special Rapporteur participated in the seventh World Congress of Education International, held in Ottawa, and underlined the need for a dynamic global response to safeguard education from it commercialization and preserve education as a social good and the importance of the resolution adopted by the World Congress on privatization in and commercialization of education.

9. On 28 July, the Special Rapporteur participated in a webinar on the challenges posed by public-private partnerships in realizing the right to education, convened by the Oxford Human Rights Hub and the Open Society Foundation. The webinar served as a global expert consultation on issues relevant to the Special Rapporteur's report to the General Assembly.

10. On 18 and 19 August, the Special Rapporteur participated in a forum on the development of Xinjiang, China. In the opening address, he underlined the importance of the forum in the context of the post-2015 sustainable development agenda, of developing skills, of international development cooperation and of adopting an integrated approach to education.

11. On 21 August, the Special Rapporteur gave an opening address at an international symposium on the grassland silk road and world civilization organized by the Inner Mongolia Academy of Social Sciences and held in Huhhot, Inner Mongolia Autonomous Region of China. He highlighted the importance of the symposium in providing a better appreciation for the richness of intangible heritage.

12. On 26 August, the Special Rapporteur spoke about the right to education to members and students of the Indian Law Institute, in New Delhi. On 5 September, he gave a public lecture on contemporary issues and challenges relating to the right to education for emerging and developing countries at the Centre for Social Sciences and Humanities, also in New Delhi.

13. On 8 September, the Special Rapporteur participated in a high-level panel, organized to mark International Literacy Day, held at the headquarters of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in Paris. He spoke of literacy as a right and about the relationship between that right and lifelong learning, and focused on its implications and conceptual issues in view of the sustainable development agenda to be adopted by the General Assembly.

14. From 30 September to 2 October, the Special Rapporteur was in Moscow to address the Peoples' Friendship University of Russia, where he gave a lecture on the right to

education and international law. During his stay, he also gave a lecture at Kutafin Moscow State Law University on the right to education.

15. On 12 and 13 October, the Special Rapporteur participated in the international seminar on human rights education organized by the Independent Permanent Human Rights Commission of the Organization of Islamic Cooperation and the Government of Indonesia, held in Jakarta. In his address, he discussed the need to promote human rights education through public education policies.

16. On 26 October, the Special Rapporteur addressed the opening session of the fourth International Scientific Congress "Globalistics", organized on the occasion of celebrations to mark the seventieth anniversary of the United Nations at Lomonosov Moscow State University. He focused on the right to education and the challenges of globalization, underlining the importance of upholding the ideals and principles of the United Nations.

17. On 27 and 28 October, he addressed the plenary session of the BRICS University Summit, on the theme "Education as a source of global development", held in Moscow on the occasion of celebrations to mark the seventieth anniversary of the United Nations. The event was organized by the Moscow State Institute of International Relations and a consortium of leading Russian universities. He spoke on the right to education, the importance of skills development, new modalities for recognizing studies and qualifications gained in different places, especially in private higher education institutions, the need for regulating privatization and safeguarding humanistic mission of education.

18. On 4 November, the Special Rapporteur spoke at the Education 2030 high-level meeting organized by UNESCO and held in Paris during the thirty-eighth session of the UNESCO General Conference. He spoke of the current challenges, including privatization, lack of investment and private-public partnerships in education.

19. On 17 November, he gave a speech as a special guest at the meeting of BRICS senior officials on education organized by the Ministry of Education and Science of the Russian Federation. The meeting aimed to create a network of universities. The Special Rapporteur spoke about the right to higher education and proposed public policy responses to the internationalization of higher education.

20. On 23 November, the Special Rapporteur addressed the opening session of the regional consultation and dialogue on a framework for action on Education 2030 for West and Central African countries, organized by the UNESCO regional office in Dakar and partners. He emphasized the need for taking specific measures, including the establishment of monitoring mechanisms, to make progress in implementing the Education 2030 agenda. On 25 November, he addressed the closing session of the regional consultation.

21. On 3 February 2016, the Special Rapporteur held discussions with the Brussels-based organization Education International on a potential collaboration on the theme of privatization and commercialization of education. During the discussions, the Special Rapporteur and the representatives of Education International spoke of how to jointly promote government accountability in education in the sustainable development agenda and how to collaborate on advocating quality education for all as a fundamental human right.

22. On 15 February, the Special Rapporteur addressed the National University of Educational Planning and Administration, New Delhi, at a seminar on a rights-based approach to education. In his address, he discussed Indian education policy and the challenges it faces in realizing the right to education, particularly regarding its national legal system and the sustainable development agenda.

23. On 10 March, he took part in a discussion on gender equality and international law held at UNESCO headquarters in Paris on the occasion of International Women's Day. He underlined the need for a human-rights based approach that took into consideration critical

issues such as religion and culture and the work of the Committee on the Elimination of Discrimination against Women, and spoke of the challenges to women's equitable access to education.

24. On 14 March, the Special Rapporteur participated, as a panellist, in an event organized by the Permanent Mission of the Plurinational State of Bolivia to the United Nations Office and other international organizations in Geneva, and addressed the education-related goals in the post-2015 sustainable development agenda.

25. On 15 March, the Special Rapporteur met with representatives of the Platform on the Right to Education to talk about the work being done in fulfilment of his mandate.

III. The digital revolution in education

26. Digital technologies[1] are becoming ubiquitous and provide vast opportunities for new forms of connections and collaboration, as knowledge and information can be digitized and transmitted electronically.[2] They are transforming learning and teaching, and the everyday lives of academics and students. As Nicholas Carr wrote in *The Shallows: What the Internet Is Doing to Our Brains*, "the future of knowledge and culture no longer lies in books ... or records or CDs. It lies in digital files shot through our universal medium at the speed of light".[3]

27. Information and communications technologies[4] are used to access digital content (the digital versions of analogue originals, such as scanned textbooks). Increasingly, content is being designed for digital use. Online education materials and courses, e-textbooks and video and audio files streamed on the Internet, as all of which are modes of e-learning,[5] are revolutionizing the provision of education. Broadband services[6] and information and communications technologies can play a fundamental role in making

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[1] UNESCO defines "digitization" as the creation of digital objects from physical, analogue originals by means of a scanner, camera or other electronic device (see www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/mow/digitization_guidelines_for_web.pdf). Digital content involves the creation, sharing and accessing of content in digital forms, including online courses, videos, digital libraries and texts, games and applications. In the area of education, such content is moving from static reproductions of textbooks and learning materials towards interactive education software and online learning products.

[2] Susan D'Antoni, ed., *The Virtual University: Models and Messages — Lessons from Case Studies* (UNESCO, Paris, 2006), p. 51.

[3] Nicholas Carr, *The Shallows: What the Internet Is Doing to Our Brains* (W.W. Norton and Co., New York and London, 2010), p. 41.

[4] "Information and communications technologies" is an umbrella term that includes any communication device or application, including radio, television, cellular telephones, computers, network hardware and software, satellite systems and the various services and applications associated with them, such as videoconferencing and distance learning (see http://searchcio.techtarget.com/definition/ICT-information-and-communications-technology-or-technologies).

[5] OECD defines "e-learning" as the use of information and communications technologies to enhance and/or support learning in tertiary education, whether provided online, using computers or any other tool that enables distance learning. See OECD, "E-learning in tertiary education" (2005).

[6] The term "broadband" refers to multiple aspects of network services, including high-speed access to the Internet and/or the services and applications available through broadband networks. See http://broadbandtoolkit.org/1.2.

knowledge, information and education accessible and in supporting the development of new skills.[7]

28. The digital revolution is taking place at a dazzling rate,[8] as digital devices multiply learning pathways and diversify learning approaches.[9]

29. Many countries and universities are keen to embrace the potential of information and communications technologies, as the Special Rapporteur witnessed during his recent visit to Fiji. A key element in the discussion of the implications of digital technology for educational institutions is the notion that universities no longer hold a monopoly on knowledge, as new actors, such as for-profit education institutions and other private providers, enter the field.

30. Massive open online courses provide an alternative path to higher education. Many universities worldwide are now offering online courses, either alone or in conjunction with a massive open online course provider. Many enthusiastic promoters of knowledge societies, networking and lifelong learning can dream today of a world converted into a giant classroom in which there are a few powerful global teachers and millions of assimilators of information and knowledge packages through the Internet. Similarly, open educational resources[10] can harness the new possibility afforded by digital technology to address common educational challenges. As a result, the landscape of higher education is undergoing rapid transformations.

IV. The digital divide

31. In spite of progress made, there are still inequalities in higher education, particularly in developing and least developed countries.[11]

32. In the 2030 Agenda for Sustainable Development, States recognized the importance of the spread of information and communications technologies and global interconnectedness, and stressed the need to bridge the digital divide and to develop knowledge societies.[12]

33. In the 1988 World Declaration on Higher Education for the Twenty-First Century: Vision and Action, the potential and the challenges of information and communications technologies were addressed, with a focus on quality and high standards and concern for

[7] Broadband Commission for Digital Development, *The State of Broadband 2014: Broadband for All* (Geneva, 2014), chap. 4.

[8] John Morgan, "Universities challenged: the impact of digital technology on teaching and learning", Educational Innovation Position Paper (September 2013), p. 13.

[9] UNESCO, *Leveraging Information and Communication Technologies to Achieve the Post-2015 Education Goal: Report of the International Conference on ICT and Post-2015 Education* (2015), p. 5.

[10] "Open educational resources" is a term that was coined at the UNESCO 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries. It is defined as "teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions" (see the 2012 Paris Open Educational Resources Declaration). See also OECD, *Open Educational Resources: A Catalyst for Innovation* (2015).

[11] "Online, open and flexible higher education for the future we want: from statements to action — equity, access and quality learning outcomes", message adopted at the global high-level forum held in Paris from 9 to 11 June 2015. Available at www.icde.org/assets/WHAT_WE_DO/POLICY/parismessage13072015final.pdf.

[12] General Assembly resolution 70/1, para. 15.

inequalities. Institutions of higher education using information and communications technologies to modernize their work should make sure they do not transform themselves from real into virtual institutions.

A. Disparities in access to the Internet and digital technology

34. Digital technologies are ubiquitous only in principle; in real life, their presence is fractured by the digital divide.

35. Statistics from the International Telecommunication Union[13] show that, despite impressive growth overall, developing countries continue to lag behind. In 2015, 34 per cent of households in developing countries and only 7 per cent of those in the least developed countries had Internet access, compared with more than 80 per cent in developed countries, creating a global average of 43 per cent. In Africa, one in five people use the Internet, compared to almost two in five people in Asia and the Pacific and three in five people in the Commonwealth of Independent States.[14] The fundamental challenge is making access to learning and educational resources through the Internet more equal among countries, but also making equal the capacity to supply such education.[15]

B. Infrastructure constraints

36. One of the barriers that must be addressed relates to the cost of investing in information and communications technologies. The technological infrastructure, along with the software, the technical support, educator training, and maintenance, requires significant financial support from the State. Digital devices are not always affordable in the developing world, neither to students nor to public educational establishments. The high costs of digital technology are causing universities to establish consortiums to share resources, costs and infrastructure.

37. Technology in education provides important benefits but it can also impair the right to education. While a digital device-based education can bring advantages in the form of access to a computer or electronic device, when students or schools lack the financial means to obtain access, they fall behind. When only some schools are provided with technology, or when private schools can afford better technology, existing social divisions in education outcomes will increase.

38. In this respect, it is important to note that States are responsible, under international human rights law, for providing resources for the realization of the right to education. Recognizing education as a foundation of human development, Governments must devote maximum public funds to education as a matter of norm. For budgets to be allocated to education on a firm and enduring basis, a legal framework providing sustainable political and financial support is crucial. Massive open online courses should not be used by Governments to reduce public funding and cut instructional costs.

C. Marginalization and exclusion

39. The use of digital technology risks creating divisions within society. Devices such as computers, tablets and smartphones, and broadband services, are required to access the

[13] See www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2015.pdf.
[14] Ibid.
[15] Susan D'Antoni, ed., *The Virtual University: Models and Messages*, p. 45.

Internet. People in urban areas receive access of better quality first, leaving those in remote areas disadvantaged or cut off. Reliable access to electricity to charge devices is often a problem in the developing world.

40. Information and communications technologies can result in educational deprivation, particularly for the poor. Special attention must be paid to questions related to access and skills for the most marginalized groups, including girls and women and persons with disabilities. The guiding principle must be to adopt an all-inclusive approach.[16]

41. Provision of education through digital technology may also contribute to gender disparities. Currently, in developing countries, males are far more likely than females to own and use information and communications technologies. In low-to-middle-income countries, 25 per cent fewer women than men have Internet connectivity, and this gap rises to nearly 50 per cent in some parts of sub-Saharan Africa.[17]

42. Children with disabilities face several barriers in accessing information and communications technologies, as they may need adaptive technologies to use computers, tablets and mobile telephones. Moreover, online digital content may need to be converted into another format. Children in developing countries who do not attend schools rarely have access to computers.

43. The signatories to the declaration[18] adopted at the International Conference on Information and Communications Technologies and Post-2015 Education, held in Qingdao, China, affirmed their collective understanding of how to unleash the full potential of information and communications technologies for education and for achieving the Sustainable Development Goals. They also reaffirmed their commitment to the Incheon Declaration and the Education 2030 framework for action and to the use of technology to strengthen access to and inclusion in education.

V. Digital technologies and norms and principles of the right to education

44. The application of technology to education must always be conducted in conformity with the right to education. It is important to ensure that the principles and norms of the right to education are preserved when using information and communications technologies. Universal access is an essential prerequisite for the full exercise of the right to education. Under a number of international conventions establishing the right to education, States have international obligations to provide primary education at no cost. They also have the obligation to make secondary education, including technical and vocational education, generally accessible; higher education should be made accessible, on the basis of merit or capacity. Education at all levels must be made, progressively, accessible to all.

45. The Special Rapporteur recalls that, as equality of opportunity in education is a principle underlying all human rights conventions, it must be respected. The framework for action for the implementation of the Incheon Declaration contains a commitment by

[16] Statement endorsed by participants in the special session of the Broadband Commission for Sustainable Development held in Davos, Switzerland, on January 2016. Available from www.broadbandcommission.org/Documents/publications/davos-statement-jan2016-en.pdf.

[17] *Bridging the Gender Gap: Mobile Access and Usage in Low- and Middle-Income Countries* (2015). Available from www.gsma.com/connectedwomen/wp-content/uploads/2015/04/GSM0001_03232015_GSMAReport_Executive-Summary_NEWGRAYS-web.pdf.

[18] See http://unesdoc.unesco.org/images/0023/002333/233352E.pdf.

Governments to make tertiary education progressively free, in line with existing international agreements.

46. In the Convention on the Rights of the Child, in particular article 28, States parties recognized the need to achieve the right to education progressively and on the basis of equal opportunity. Specifically, they committed to promoting and encouraging international cooperation in matters relating to education, in particular with a view to facilitating access to scientific and technical knowledge and modern teaching methods. In article 24 of the Convention on the Rights of Persons with Disabilities, States parties recognized the right of persons with disabilities to education and committed to ensuring an inclusive education system at all levels. They also committed to taking appropriate measures to train professionals in disability awareness and the use of augmentative and alternative modes, means and formats of communication, educational techniques and materials to support persons with disabilities.

47. States parties to the Convention on the Rights of Persons with Disabilities further committed to taking appropriate measures to promote access for persons with disabilities to new information and communications technologies and systems, including the Internet, and to promoting the design, development, production and distribution of information and communications technologies accessible to persons with disabilities.

VI. Challenges to quality and issues relating to the recognition of degrees and diplomas

48. The use of digital technologies poses multiple challenges regarding quality in education. The Special Rapporteur would like to outline some critical concerns in need of a policy response.

49. One of the main challenges for higher education today is how it can respond to the massive global demand for professional qualifications while maintaining its key role in research. This must be seen in the context of the online provision of education.

50. There is no real or conclusive evidence that online learning leads to better learning outcomes for students.[19] A recent study by the Organization for Economic Cooperation and Development (OECD) has found that over the past 10 years there has been no appreciable improvement in student achievement in reading, mathematics or science in countries that have invested heavily in information and communications technologies for education.[20] These findings must worry policymakers and Governments that hope to find salvation in expensive technological purchases.

51. Serious questions are being raised regarding the quality of education provided through online courses, particularly massive open online courses. Most participating students already have a university degree, raising the question of whether such programmes are increasing access or equity in education. A 2013 survey found that as few as 7.5 per cent of students were completing courses.[21] The quality of massive open online courses, which essentially involve self-study and lack the structure of other online courses, is particularly worrying. Teaching methods have been criticized as outdated because most of

[19] John Morgan, "Universities challenged", p. 12.

[20] OECD, *Students, Computers and Learning: Making the Connection* (Paris, 2015). Available from www.oecd.org/publications/students-computersand-learning-9789264239555-en.htm.

[21] Steve Kolowich, "The professors who make the MOOCs", *The Chronicle of Higher Education* (18 March 2013). Available from http://chronicle.com/article/The-Professors-Behin -the-MOOC/137905/#id=overview.

these courses still rely on information transmission, computer-marked assignments and peer assessment.[22]

52. The emerging trend of giving qualifications through massive open online courses for distance learning is concerning, as many of the usual modalities of university instruction and assessment are lacking. Often, students enrolled in massive open online courses are not assessed, or are inadequately assessed, and are not given certificates. Although institutions have started to award credits for massive open online courses and novel forms of certifications such as badges are being introduced, these are still seen as an inferior form of educational outcome and an inadequate indication of the quality of learning. Such criticisms may be more relevant to universities in the global North.[23]

53. A large number of private providers specialize in areas such as management, marketing, accountancy and communication and award diplomas and degrees that are devoid of equivalence or validity. There is also a risk of fraud associated with the awarding of online degrees. Online or distance education providers often operate from locations with no controls at all, and offer their own degrees, free from regulation. Public authorities must find ways of preventing underqualified or fraudulent providers from trading as universities and from issuing worthless qualifications when the providers are based overseas and operate through the Internet.[24]

54. The Special Rapporteur recognizes the importance of the ongoing work of UNESCO in preparing a global convention on the recognition of higher education qualifications.[25] He hopes that it will address the issue of fake degrees by online providers of education and that it will contain provisions as regards qualifications and certificates issued upon completion of online courses. Moreover, it is important to look into the range of issues arising from the awarding of degrees and diplomas by virtual universities, which lack face-to-face teaching and learning.

VII. Importance of face-to-face learning and the role of teachers

55. The autonomy of teachers to teach as they deem best can be hampered by technology-based education models. From scripted tablet-based learning to massive open online courses with prescribed teaching modules, the ability of teachers to select content that they feel is relevant for their local conditions and classes is being impaired.

56. Education should be tailored to the needs of students and the local context. It has been noted that massive open online courses reflect an overwhelmingly Western, Anglo-American method based on a particular academic experience, knowledge base and pedagogical approach.[26] The vast majority of courses are offered in English, which by definition cannot be sensitive to the local values and cultures of all countries.

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[22] Tony Bates, "What's right and what's wrong about Coursera-style MOOCs" (5 August 2012). Available from www.tonybates.ca/2012/08/05/whats-right-and-whats-wrong-about-coursera-style-moocs.

[23] Michael Trucano, "More about MOOCs and developing countries (12 November 2013). Available from http://blogs.worldbank.org/edutech/moocs-developing-countries.

[24] John Fielden and N.V. Varghese, "Regulatory issues", in *A New Dynamic: Private Higher Education*, Svava Bjarnason and others, eds., (UNESCO, Paris, 2009), pp. 71-89.

[25] See http://unesdoc.unesco.org/images/0023/002352/235261e.pdf.

[26] Education International, statement on massive open online courses made available at http://ei-ie.typepad.com/files/ei_policy_statement_moocs_2014.pdf.

57. Academic freedom includes the right to teach without any interference, including the right to choose the content and methods of teaching and the freedom to use or not to use any specific technique or technology.

58. In the light of the rise of online and web-based learning, the Special Rapporteur considers it important to recognize the limits of the pedagogical value of technology-based and distance education, putting a premium on face-to-face learning and human interactions in education. All forms of online education may help increase access to higher education, but only if they are a supplement to, and not a replacement for, proven pedagogical practices. Very high enrollment rates for massive open online courses are offset by their extremely low completion rates, which traditional face-to-face teaching does not suffer from.

59. The introduction of technology in the classroom does, however, have an important impact on the role of the teacher. Electronic materials should complement the existing classroom practices, as videos or online exercises supplement traditional learning. Through face-to-face interactions the teacher can more easily gauge the level of understanding and participation of learners and implement interventions to address issues.[27]

60. The current implementation of massive open online courses seems to focus more on content dissemination and rather less on learner engagement and interaction. This concern is consistent with the recent discussion within the research community regarding the approaches needed to make massive open online courses more interactive, social and personalized.[28]

61. In digital classrooms, the teacher remains responsible for selecting and developing the curriculum. Guidance, attention and commitment are necessary for student-centred learning.

VIII. Preserving human values in digital technology

62. There are critical questions relating to human values and the education system. For example, the Committee on the Rights of the Child has expressed concern about the risks that access to the Internet, whether at school or at home, pose for children.

63. The negative impact of information and communications technologies on the quality of learning, as well as on the mission of universities as the seat of learning, must be taken into consideration. Without diversified sources, massive open online courses can reinforce a monolithic education system. A greater proportion of students are reading less, referencing less and writing with less clarity and boldness. Students rely on the Internet rather than on referred course readings for research material. The popularity of Google is facilitating laziness, poor scholarship and compliant thinking.[29] The Internet seems to be chipping away at students' capacity for concentration and contemplation.[30] Use of the Internet and digitalization places the focus on application rather than on contemplation.[31]

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[27] Leila Goosen and Dalize Van Heerden, "E-learning management system technologies for teaching programming at a distance", *Proceedings of the International Conference on e-Learning* (2015), pp. 116-126.

[28] UNESCO, *Leveraging Information and Communication Technologies to Achieve the Post-2015 Education Goal*, p. 28.

[29] Tara Brabazon, *The University of Google: Education in the (Post) Information Age*, cited in John Morgan, "Universities challenged", p. 16.

[30] Nicholas Carr, *The Shallows*, p. 13.

[31] Susan D'Antoni, ed., *The Virtual University*, p. 53.

64. Concern has been expressed regarding the negative impact of digitization, for example regarding the "reordering of education institutions in line with the logical network" and with respect to network time as a "chronic distraction".[32]

65. Nicholas Carr provides profound insights into the deleterious impact of digital devices on our mind and spirit, and sheds light on how this scuttles humanist values in education: "How sad it would be, particularly when it comes to the nurturing of our children's minds, if we were to accept without question the idea that 'human elements' are outmoded and dispensable." Meditative thinking, the very essence of our humanity, might become a victim of this.[33]

IX. Fostering the humanistic mission of education

66. In the Qingdao declaration, the challenge of realizing the potential of digital technologies within a humanistic framework was identified.[34]

67. Full development of the human personality is the primary objective of education, as laid down in international human rights conventions. The four pillars of education — learning to know, learning to do, learning to live together and learning to be — propounded by the International Commission on Education for the Twenty-First Century in its 1996 report *Learning: the Treasure Within*, continue to be important. Higher education is a public good and a public service, and massive open online courses should not be used to weaken public provision of education or promote the privatization and commercialization of public education.[35]

68. Universities, as the moral seat of learning, must foster the common human values so much in need today, in the face of the challenges of globalization. Fostering the humanistic mission of education is of paramount importance to counter the trend towards the pursuit of material values and a merely instrumental role for education. This is critically important, as the humanistic mission of education is being vitiated.

X Risks of digital education

69. Misuse of technology can lead to cyberbullying, criminal activity and even to terrorism. Educators must prepare their students to face new risks. The need to protect children from the potentially harmful effects of online content has been underlined by the Committee on the Rights of the Child. Most serious is the risk of sexual abuse or exploitation, but less serious risks include advertisements, spam, sponsorship, disclosure of personal information, and content that is aggressive, violent, hateful, biased, racist, pornographic, unwelcome and misleading.[36] The State must take measures to protect children from online harassment, including bullying or "grooming" for sexual purposes. Finally, care must be taken to ensure children do not become involved in illegal activities, financial scams or terrorism.[37]

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[32] John Morgan, "Universities challenged", p. 18.

[33] Nicholas Carr, *The Shallows*, p. 87.

[34] "Online, open and flexible higher education for the future we want".

[35] Education International, statement on massive open online courses.

[36] See Committee on the Rights of the Child general comment No. 13 (2011) on the right of the child to freedom from all forms of violence, para. 31.

[37] Ibid.

70. In its resolution 55/63, the General Assembly expressed concern that technological advancements have created new possibilities for criminal activity, in particular the criminal misuse of information technologies, and noted the value of making the general public aware of the need to prevent and combat the criminal misuse of information technologies. Education plays an important role in raising awareness on the issue.

XI. Digital technology and copyright law

71. Digital education, in all its forms, relies on teaching materials, textbooks and other forms of transmitting information that are subject to copyright law.

A. Copyright issues

72. It is important to look into intellectual property rights and the use of digital technology in education and learning, bearing in mind the 1971 Berne Convention for the Protection of Literary and Artistic Works, the 1994 World Trade Organization Agreement on Trade-related Aspects of Intellectual Property Rights and the 1951 UNESCO Universal Copyright Convention, among other international treaties.

73. The Special Rapporteur is concerned, however, that exceptions to copyright law exist that allow for the free use of materials in education. Digitizing content does not change the intellectual property rights of the owners of the original materials, which must be respected and maintained.[38]

74. Currently, most massive open online course providers establish a proprietary claim on material included in their courses, license the access and use of that material to the user and exercise ownership over user-generated content. To fully exercise academic freedom, however, higher education teaching personnel should retain ownership of their course material, including material used in distance and online courses.[39]

75. In the digital marketplace, publication becomes an ongoing process rather than a discrete event, and revision can go on indefinitely.[40] Higher education teaching personnel should retain intellectual property rights over course material, no matter the mode of delivery.

76. The private interest of the copyright holder must be respectful of the broader social interest of the public. The public importance of education outweighs the value of allowing copyright holders to seek a profit. This principle is reflected in a number of exemptions to copyright law. The 1971 Appendix to the Berne Convention for the Protection of Literary and Artistic Works sets out special provisions for developing countries that include challenging procedural requirements.[41]

77. There is no human right to seek a profit, and the public interest in respecting the right to education must take priority in public policies, nationally and internationally. States should update their copyright treaties and legislation to allow all public educational institutions to have free access to all information used for educational purposes.

78. Proprietary standards from private companies are being promoted worldwide as a simple panacea to meet the information and communications technology objectives of

[38] http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/mow/digitization_guidelines_for_web.pdf.

[39] Education International, statement on massive open online courses.

[40] Cited in Nicholas Carr, *The Shallows*, p. 47.

[41] See, in particular, art. III (3) (i) of the Appendix.

Governments. Yet, such solutions create multiple levels of risk. States must take particular care when implementing information and communications technology programmes in education so as to recognize the risks that emerge from selecting proprietary providers of hardware, software and education materials.

79. Persons with disabilities, particularly those who cannot make use of print media, are denied access to information and cultural life when copyright laws prevent them from converting media to other formats. The use of Braille printers, text readers or digitalization aides to convert print media into accessible formats amounts to illegal copying, unless exceptions are created in national laws. While exceptions have been created by some countries, a general exception allowing texts to be converted for the purposes of accessibility should be made a general principle of copyright law.

80. The Accessible Books Consortium (a multi-stakeholder partnership comprising the World Intellectual Property Organization, organizations that serve people with print disabilities and organizations representing publishers and authors) is converting books into formats to make them available to people who are blind, have low vision or are otherwise print disabled. Such partnerships should be encouraged to ensure human rights in education are met.

81. The Committee on the Rights of the Child has called[42] upon States to establish copyright exceptions that benefit children with visual or other impairments, reinforcing the obligation set out in article 30 of the Convention on the Rights of Persons with Disabilities for States to ensure that laws protecting intellectual property rights do not constitute an unreasonable or discriminatory barrier to access by persons with disabilities to cultural materials.

82. The Special Rapporteur urges States to ratify and implement the 2013 Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled, which calls for the creation of copyright exceptions in national legislation to ensure the accessibility of published works, in any media, for blind, visually impaired or otherwise print-disabled persons.

B. Open licensing frameworks

83. Copyright law reserves all rights to the author or owner and requires either legislative or licensed exceptions to be set out in an agreement. On the other hand, open licensing allows authors to publish their work for anyone to share and use, while still allowing them to reserve more rights if they choose.

84. In order to create a standardized and widely recognized open licensing framework, the non-profit organization Creative Commons developed a series of standardized copyright licenses. Creative Commons encourages copyright owners to license the use of their material through open content licences. These will allow for better identification, negotiation and use of their content for the purposes of creativity, education and innovation. By minimizing copyright licensing efforts and complexity, authors can ensure their work is rapidly and easily used.[43]

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[42] See Committee on the Rights of the Child general comment No. 16 (2013) on State obligations regarding the impact of business on children's rights.

[43] Berkman Center for Internet and Society, Harvard Law School, "The digital learning challenge: obstacles to educational uses of copyrighted material in the digital age". Available from http://cyber.law.harvard.edu/media/files/copyrightandeducation.html.

C. Open educational resources

85. Open educational resources are teaching, learning and research resources that reside in the public domain or have been released under an intellectual property licence that permits others to use them freely and for different purposes.

86. First discussed at the UNESCO Forum on the Impact of Open Courseware for Higher Education in Developing Countries, held in Paris from 1 to 3 July 2000, open educational resources are understood to be all teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open licence that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work.[44]

87. Open educational resources capture the idea that knowledge is a public good that shou'd be freely shared by all and not restricted for private profit. This concept was further developed at the World Open Educational Resources Congress, held in Paris from 20 to 22 June 2012, on which occasion the 2012 Paris Open Educational Resources Declaration was adopted. The signatories to the Declaration called upon States to support, promote and make greater use of open educational resources.

88. A number of initiatives and foundations support the development and dissemination of open educational resources. The Open Educational Resources Commons provides access to digital learning materials for all levels of education in English. Teaching materials and textbooks for all subjects are available for pre-primary to secondary schools, as well as for university courses and adult education. The Open Education Consortium is a non-profit global network of educational institutions, individuals and organizations that collaborate and develop open educational materials, including textbooks and courses in 26 languages, particularly in the sciences and technology. The UNESCO Institute for Information Technologies in Education acts as a as a centre of excellence and provider of technical support and expertise in the area of information and communications technology usage in education.

XII. Digital technologies and the forces of privatization in education

89. Digital technologies necessarily involve private partners and agencies that collaborate with universities, both public and private, on the procurement and operationalization of not only hardware but also software. The use of digital technologies in education has led to more consumer-oriented attitudes in universities and is resulting in the commodification of knowledge and the valuing of information in economic terms rather than for its social and cultural significance. Sponsored by a range of entities, including individual proprietors and profit-seeking businesses, private institutions of higher education now constitute the fastest-growing segment of higher education. Corporate funding of higher education raises questions of academic independence, as well as ethical questions. Universities are moving away from their social function. The commercialization of education could divert attention away from the classical type of higher education by accumulating advantages in the most advanced countries and institutions, by discriminating

[44] 2012 Paris Open Educational Resources Declaration. See also OECD, *Open Educational Resources: A Catalyst for Innovation*.

against the most deprived and by contributing to brain drain in many poor countries.[45] There is evidence of an emerging global marketplace and a growing spirit of competition in higher education.[46]

90. Massive open online courses and other distance education formats can promote privatization, reduce public funding and increase managerial control over academic staff.[47] "Market-leading" universities could capture the higher education market as a whole, since customers will choose the most prestigious courses in elite universities associated with "star" professors.[48] This phenomenon has been termed "an emerging brand of academic capitalism"[49] that is associated with entrepreneurship, as it seeks to raise significant income from the private sector.

91. Private sector enterprises are emerging key players in digitization.[50] The commercial interest of providers, which enables them to enter the higher education market using a massive open online course approach, can be the reason for offering such courses. Governments, institutions and private providers may misuse massive open online courses and other distance education technologies to promote privatization, reduce public funding and increase managerial control over academic staff.

92. Recalling the report he submitted to the General Assembly at its seventieth session, in which he expressed concern regarding the risks of public-private partnerships and the right to education, the Special Rapporteur calls upon Governments to be vigilant against commercial pressures that promote the sale of technology without due concern for the actual benefits of students or teachers, educational establishments and the education system at large. Governments should seek evidence of the value of any investment into digital technologies before diverting resources from the education sector. This is critically important as growing interest is being manifested today in seeking partnerships with multiple stakeholders. The Special Rapporteur emphasizes that Governments and, through them, all providers of education, whether operating independently or jointly with Governments, remain accountable given that States bear responsibility for ensuring respect for the right to education in all partnerships.

93. The norms and principles that underlie the right to education are affected by the market forces associated with digital technologies. It is of utmost importance that education be safeguarded against the forces of privatization.

XIII. Legal and policy responses to cope with the digital revolution

94. The "digital tsunami" is so powerful that legal and policy responses are not able to keep pace with it. The need for and the importance of digital technologies not only as tools but also as resources in teaching and learning processes and in creating immense possibilities of connections and collaboration must be recognized. Governments need to break down barriers to open information, eliminate digital divides and expand usage and coverage of digital services. They must optimize regulations and public policies and

[45] Susan D'Antoni, ed., *The Virtual University*, p. 45.
[46] Ibid., p. 52.
[47] Education International, statement on massive open online courses.
[48] John Morgan, "Universities challenged", p. 6.
[49] Ibid., p. 7.
[50] For example, two leading United States universities, Harvard University and the Massachusetts Institute of Technology, have collaborated with two companies, Udacity and Coursera, to form partnerships and build massive open online courses under the name edX. See John Morgan, "Universities challenged", p. 6.

enhance the governance of the Internet to ensure the safe, equal and healthy application of information and communications technologies.[51]

95. The Special Rapporteur refers to the declaration adopted at the sixth BRICS summit, held in Fortaleza, Brazil, from 14 to 16 July 2014, in which the signatories agreed that the use and development of information and communications technologies through international cooperation and universally accepted norms and principles of international law is of paramount importance in order to ensure a peaceful, secure and open digital and Internet space.[52]

Enabling environment

96. Public policies should give consideration to the creation of an enabling policy environment for drawing upon digital technologies that can serve as valuable tool in the delivery of education. For instance, in order for open educational resources to be available and effective, laws and policies that facilitate and encourage their use are necessary.

97. Polices should foster interactive education software, open access digital libraries and new forms of interaction between students, teachers, others employed in education and the community that can enrich education by integrating such technologies into traditional classroom activities. Such policies should, however, be designed in such a way as to ensure that these new technologies are used as supplements to and not as replacements for in-class instruction.[53]

98. Enabling policies and a sound regulatory environment are necessary to promote the development of local and relevant content and services and to increase understanding of the impact of Internet access in terms of sociocultural developments.

99. Gaining the resources for digital technologies will inevitably involve private providers such as network operators, content providers and other stakeholders. Massive open online courses can involve creating partnerships between educational institutions in developed and developing countries, Governments, development agencies and the private sector. It is when Governments establish fundamental principles and a clear policy framework that the private sector can be involved in the provision of relevant products and services.[54]

100. The use of digital technologies in education must be in full accordance with the right to education. Such use must increase access, not limit it. It must promote equity, not exacerbate existing disparities in society. It must eliminate discrimination, not create new barriers. It must improve the quality of education, not undermine it.

XIV. Regulatory framework

101. In order to take advantage of the many opportunities associated with open educational resources and online learning in general, standards and quality assurance mechanisms need to be agreed and adopted, especially for monitoring, measuring and

[51] John Morgan, "Universities challenged", p. 8.

[52] See http://brics.itamaraty.gov.br/media2/press-releases/214-sixth-brics-summit-fortaleza-declaration.

[53] See the resolution on the use of information and communications technology adopted at the seventh World Congress of Education International, held in Ottawa from 22 to 26 July 2015.

[54] UNESCO, *Leveraging Information and Communication Technologies to Achieve the Post-2015 Education Goal*, p. 12.

validating learning outcomes. Policies regulating the development and use of these resources should be designed to add value to existing education policies and to contribute to meeting education goals, rather than to function as isolated, additional policy documents.[55]

102. An area that poses stupendous challenges is that of controlling online or correspondence providers, many of which operate from locations with no controls at all and offer their own awards, free from regulation. Public authorities must find ways of preventing underqualified or fraudulent providers from acting as universities and from issuing worthless qualifications, including in situations where providers are based overseas and operate through the Internet.

103. A regulatory framework is necessary since an unregulated free market in higher education may lead to investments in the sector by low-quality providers. Governments must regulate fraudulent practices and ensure that fake degrees are not awarded. A regulatory framework is thus of critical importance in setting out responsibilities and accountability requirements.[56] Regulations must reflect a broad humanistic notion of education and ensure that the digitization of education is subservient to public interest.

104. The Special Rapporteur makes recommendations regarding prescriptive, prohibitive and punitive regulations on the use of digital technology in education with a view to ensuring that the right to education is adequately protected.

A. Prescriptive regulations

105. Prescriptive regulations are necessary to ensure that digital technologies supplement rather than supplant campus-based face-to-face teaching and learning. The use of information and communications technologies should not be detrimental to the social function of universities or undermine their core mission as the moral seat of learning.

B. Prohibitive regulations

106. Prohibitive regulations are necessary to ensure that fraudulent practices, for example in the online delivery of education, and any attempt to commercialize education are not allowed. Governments should prohibit all commercial advertising and propaganda on the virtues of information and communications technologies that are detrimental to basic human values and ban any portal or website facilitating pornography, violence, cybercrime, terrorism and any other crime.

C. Punitive regulations

107. Punitive regulations are required to address fraudulent practices, including the awarding of fake degrees and diplomas. It is important that corrupt and fraudulent practices be investigated and that operators who act illegally be prosecuted.

[55] Ibid., p. 33.

[56] See http://campaignforeducation.org/en/news/global/view/623-representatives-from-91-countries-come-together-for-the-fifth-gce-world-assembly.

XV. Conclusions

108. **Digital technologies are revolutionizing the provision of education. Multiple learning pathways, such as e-learning, massive open online courses and open educational resources, are contributing to the diversification of learning approaches. Disparities in access to digital technologies persist, however, and countries need to bridge the digital divide. Marginalization and exclusion compromise the principles of social justice and equity, which are key pillars of the United Nations system's work on peace and development.**

109. **In the 1998 World Declaration on Higher Education for the Twenty-First Century: Vision and Action, signatories called upon higher education institutions to give the opportunity to students to fully develop their own abilities with a sense of social responsibility, educating them to become full participants in democratic society and promoters of changes that will foster equity and justice.**

110. **The use of digital technologies carries the risk of undermining human values in education and the quality of education, especially as regards degrees and diplomas that are fraudulently delivered.**

111. **Moreover, the implications of digital technologies and copyright must be examined critically in order to better understand the rights to access to knowledge and information.**

112. **Digital technologies are negatively affecting the cause of education by impairing the ability of students to contemplate and think critically, by scuttling human values in education and by paving the way for the commodification of education.**

113. **In the light of their obligations under the norms and principles of the right to education, States must ensure that digital technologies do not impair universal access to education or equality of opportunity in education. Nor should they be allowed to erode the concept of education as a public good.**

114. **Governments must learn from the lessons of the past, when technologies were purchased without due consideration being given to the many factors that contribute to success. Computers and tablets alone make no difference in learning outcomes if teachers and administrators of educational establishments have not been involved in planning and have not received adequate training to effectively use the technology in the classroom.**

115. **The Special Rapporteur recalls that the Education 2030 framework for action specifically calls upon Governments to harness information and communications technologies to promote quality and effective learning. It also recognizes the importance of education as a public good.**

116. **In the face of the transformation of education systems, especially higher education, through digital technologies, the State remains primarily responsible for respecting and protecting the right to education on account of its international legal obligations. The State is the custodian of norms and principles and must ensure that the right to education is respected in all systems and modes of education. Governments should not abdicate their responsibility for ensuring that educational institutions retain their essential public service function. In all circumstances, the State must discharge its responsibility as guarantor and regulator of education as a fundamental human right.**

XVI. Recommendations

117. **In the light of the above, and taking into consideration the challenges that digital technologies pose to the right to education, the Special Rapporteur offers the recommendations set out below.**

State responsibility for protecting and safeguarding the right to education

118. **While recognizing the importance of opportunities arising from the use of information and communications technologies, States should not forget to look into the downside of such use and the impact of the digital divide on the education system and, in particular, on those who remain marginalized, on the future generation and on society at large.**

A rights-based approach to digital technologies

119. **States should address issues of access, quality and equity in the use of digital technology in education and ensure that students' right to education is exercised in an equitable manner and that it is fully respected. There is a great risk that technology will widen inequalities in society if an equitable approach to its use is not adopted. State obligations for respecting, protecting and fulfilling the right to education should be a priority concern.**

Bridging the digital divide

120. **All States have the responsibility to achieve the right to education progressively and to the maximum extent of their resources. Implementation strategies must take into account the Sustainable Development Goals and the obligations on the right to education. Disaggregated indicators and annual reports must indicate whether investments are improving the education outcomes of students or creating unintended negative outcomes that require remedial action.**

Safeguarding education from the forces of privatization

121. **The forces of privatization behind the spread of digital learning and education creating a marketplace in education must be exposed through public debate so as to prevent the commoditization of education. The corporate sector should not impinge upon the function and autonomy of education.**

122. **Public authorities should ensure that the use of digital technologies is considered as a means of education, not as a substitute for face- to-face education. They should recognize that human contact in education is essential to the teaching and learning process. Public authorities should also take the measures necessary to build the capacity of teachers to use digital technologies while retaining freedom in their pedagogic approaches. Teachers must have the competence and be free to adapt digital technologies to local contexts, and the authority to rearrange online teaching materials and methodologies to best serve the country's education requirements.**

Promoting open educational resources

123. **States should implement the recommendations contained in the 2012 Paris Open Educational Resources Declaration, recognizing their importance for strengthening the use of such resources while at the same time reducing the cost of education for the Government. High-quality textbooks, learning materials and online courses are important in education and, by sharing their development costs and**

promoting high-quality open resources, the savings can be invested in teacher training, school improvements and technology purchases.

Engaging Governments through the work of the United Nations human rights treaty bodies and the United Nations agencies

124. Within the scope of their respective mandates, when considering the right to education in their dialogue with States, the United Nations human rights treaty bodies should look into the use of information and communications technologies and its repercussions on the right to education. They should especially consider whether the downside of using such technologies is kept in view and policies are in line with human rights law and the internationally established framework for safeguarding the right to education while addressing the digital divide.

125. In the context of the universal periodic review mechanism of the Human Rights Council, critical attention should be given to digital technology and the right to education in the dialogue with States. Governments should be encouraged to take the measures necessary to safeguard the right to education, to maintain education as a public good and to take action whenever the right to education is compromised as a result of the application of digital technologies.

126. The obligation of States to provide inclusive, equitable, non-discriminatory education of a high quality for all must be carefully preserved in any implementation of digital technologies in education. The predominance of English in online education negatively affects the provision of education in other languages.

127. In the context of its ongoing work on the development of a global convention on the recognition of higher education qualifications, UNESCO could address the issue of the awarding of fake degrees and certificates and consider becoming a repository of all nationally recognized degrees and diplomas. UNESCO should also advise States to implement a national-level system of legal action against the awarding of fake degrees and diplomas and against fraudulent practices.

128. States should work towards creating an exception to copyright law, nationally and internationally, that permits developing countries to make use of any information or material for non-profit education purposes. Such an exemption would better balance the public interest in promoting and improving education in developing countries within the framework of a modernized international copyright framework. To this end, UNESCO, in collaboration with the World Intellectual Property Organization, should explore the possibility of creating an international open licensing framework for education resources, in consultation with stakeholders.

Engaging with parliamentarians

129. Parliamentarians play a vital role in developing laws and policies that promote the use of technology in the education sector. Legislation should explicitly protect the right to education, including in procurement legislation and commercial laws.

Encouraging and supporting civil society and non-governmental organizations

130. Governments should encourage civil society and non-governmental organizations to play a valuable role in engaging the public in debates on the impact of digital technology on the right to education, giving full consideration to the importance of access, quality and equity in education.

131. Civil society organizations and the intellectual community, as well as students, parents and community associations, should expose the negative effects of digital

technologies on the right to education, underlining, in particular, the essential objectives laid down in the Universal Declaration of Human Rights and international human rights conventions. They should voice their concerns about the need to safeguard human values in respect of the right to education in the face of digital modes of education. Their advocacy work to foster social justice and equity is valuable in countering market-based approaches promoting the use of technology in education. Research, events and expert consultations on the right to education in the digital age should be encouraged and supported.